

Sub 617 1. (Amended) A method of verifying a projected image within a view plane of an augmented-reality display system as a preselected movable object spaced from a user's viewpoint by a first distance, whereby the object may be employed as an interface tool for the system, comprising steps of:

identifying a representative characteristic of the object within the view plane;

determining dimensional aspects of the movable object from the projected image;

computing a corresponding dimensional identity and location of the object at an object point relative to the view plane and wherein the object point is spaced by a second distance from the user's viewpoint; and,

verifying whether the dimensional identity and location are reasonably consistent with predetermined standards for the object.

Sub 617 5. (Amended) The method as defined in claim 1 wherein the verifying includes testing from at least one of the tests of (a) whether the object has expected dimensions or proportions, (b) whether the corners are right angles, (c) whether a center point matches when calculated from distinct sets of the corners, (d) whether the corners are generally within a common plane, and (e) whether the object lies within an expected viewing range.

Sub 617 8. (Amended) A method for identifying a movable piece of paper in a variable viewing area of an augmented-reality display system comprising steps of:

identifying an object at a viewing plane in the viewing area having a characteristic representative of the piece of paper;

locating a plurality of corners of the object;

calculating a dimensional representation of the object in the viewing plane from the locations of the corners;

A3 unprojecting the dimensional representation to calculate a plurality of object coordinates representative of a size of the object and a distance of the object from the viewing plane; and,

comparing the object coordinates with predetermined standards indicative of the piece of paper for verifying the object as the piece of paper.

500 617 A4 13. (Amended) An augmented-reality display system for verifying a presence of a predetermined and movable reference frame within a system image, comprising:

a real item disposed within a view plane of the system;

a sensing device for identifying from the view plane a characteristic of the real item associated with the predetermined reference frame; and,

a controller for determining dimensions of the real item within the view plane, for computing a corresponding dimensional identity and location of the real item relative to the view plane, and for verifying whether the dimensional identity and location correspond with the presence of the predetermined reference frame.

500 617 A5 16. (Amended) The system as defined in claim 14 wherein the controller includes means for testing from at least one of the tests of (a) whether the object has expected dimensions or proportions, (b) whether the corners are right angles, (c) whether a center point matches when calculated from distinct sets of the corners, (d) whether the corners are generally within a common plane, and (e) whether the object lies within an expected viewing range.

New Claim 17 has been added.

A6 17. (New) The method as defined in claim 8 wherein the unprojecting comprises unprojecting a plurality of dimensional representations of the object attributable to movement of the object in the variable viewing area.